
ENVIRONMENTAL Fact Sheet



29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

WD-WMB-6

2006

New Hampshire Volunteer River Assessment Program

What is VRAP?

In 1998, the New Hampshire Department of Environmental Services established the New Hampshire Volunteer River Assessment Program (VRAP) to promote awareness and education of the importance of maintaining water quality in New Hampshire's rivers and streams. VRAP aims to educate people about river and stream water quality and ecology and to improve water quality monitoring coverage for the protection of water resources.

Today, VRAP loans water quality monitoring equipment, provides technical support, and facilitates educational programs. In 2005, VRAP supported 28 volunteer groups on numerous rivers and watersheds throughout the state. VRAP volunteers conduct water quality monitoring on an ongoing basis. The work of the VRAP volunteers increases the amount of river water quality information available to local, state and federal governments, which allows for better watershed planning.

Why is VRAP Important?

VRAP establishes a regular volunteer-driven water sampling program to assist DES in evaluating water quality throughout the state. VRAP empowers volunteers with information about the health of New Hampshire's rivers and streams. Regular collection of water quality data allows for early detection of water quality changes allowing DES to trace potential problems to their source. Data collected by VRAP volunteers are directly contributing to New Hampshire's obligations under the Clean Water Act. Measurements taken by volunteers are used in assessing the water quality of New Hampshire's river and streams, and are included in reporting to the US Environmental Protection Agency (EPA).

How Does VRAP Work?

VRAP is a cooperative program between DES, river groups, local advisory committees, watershed associations, and individuals working to protect New Hampshire's rivers and streams. VRAP volunteers are trained by VRAP staff in the use of water quality monitoring equipment at an annual training workshop. VRAP works with each group to establish monitoring stations and develop a sampling plan.

During the summer months, VRAP receives water quality data from trained volunteers. The data are reviewed for quality assurance, and are entered into the environmental monitoring database (EMD) at DES. During the off-season, VRAP interprets the data and compiles the results into an annual report for each river. VRAP volunteers can use the data as a means of understanding the details of water quality, as well as guide future sampling efforts. DES can use the data for making surface water quality assessments, provided that the data met certain quality assurance/quality control guidelines.

Equipment and Sampling Schedule

VRAP frequently lends and maintains water quality monitoring equipment kits to VRAP groups throughout the state. The kits contain meters and supplies for in-the-field core parameter measurements of water temperature, dissolved oxygen, pH, specific conductance (conductivity), and turbidity. Other parameters such as nutrients, metals, and E. coli can also be studied, although VRAP does not always provide funds to cover laboratory analysis costs. Thus, VRAP encourages groups to pursue other fundraising activities such as association membership fees, special events, in-kind services (non-monetary contributions from individuals and organizations), and grant writing.

Each year, volunteers design and arrange a sampling schedule in cooperation with VRAP staff. Project designs are created through a review and discussion of existing water quality information, such as known and perceived problem areas or locations of exceptional water quality. The interests, priorities, and resources of the partnership determine monitoring locations, parameters, and frequency. VRAP typically recommends sampling every other week from May through September, and VRAP groups are encouraged to organize a long-term sampling program in order to begin to determine trends in river conditions.

Training and Technical Support

Each VRAP volunteer attends an annual training workshop to receive a demonstration of monitoring protocols and sampling techniques. During the training, volunteers have an opportunity for hands-on use of the VRAP equipment and receive instruction in the collection of samples for laboratory analysis. After the training workshop, volunteers are certified in the care, calibration, and use of the VRAP equipment. In some cases, veteran group coordinators can attend a "train the trainer" workshop where the group coordinator receives an update in sampling protocols and techniques, and will then train the individual volunteers of their respective group.

VRAP groups conduct sampling according to a prearranged monitoring schedule and VRAP protocols. VRAP staff aim to visit each group annually during a scheduled sampling event to verify that volunteers successfully follow the VRAP protocols. If necessary, volunteers are re-trained during the visit, and the group's monitoring coordinator is notified of the result of the verification visit. VRAP groups forward water quality results to DES for incorporation into an annual report and state water quality assessment activities.

Annual Water Quality Reports and Surface Water Quality Assessments

Water quality measurements repeated over time create a picture of the fluctuating conditions in rivers and streams and help to determine where improvements, restoration or preservation may benefit the river and the communities it supports. All data collected by volunteers are summarized in water quality reports that are prepared and distributed after the conclusion of the sampling period. VRAP groups can use the reports and data as a means of understanding the details of water quality, guiding future sampling efforts, or determining restoration activities.

Along with data collected from other water quality programs, specifically the State Ambient River Monitoring Program, applicable volunteer data are used to support periodic DES surface water quality assessments. Assessment results and the methodology used to assess surface waters are published by DES every two years as required by the federal Clean Water Act.

Get Involved!

River groups, local advisory committees, watershed associations, or individuals interested in participating and learning more about VRAP may contact the DES Watershed Management Bureau at 271-2963 or e-mail vrp@des.state.nh.us. Application materials can be found on line at www.des.nh.gov/wmb/vrap . A complete application form and other completed application materials must be on file with the program prior to the start of any volunteer work in VRAP.